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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,249	09/25/2003	George Liang	2003P14215US	8144

7590 12/22/2004  
Siemens Corporation  
Intellectual Property Department  
170 Wood Avenue South  
Iselin, NJ 08830

EXAMINER

KERSHTEYN, IGOR

ART UNIT PAPER NUMBER

3745

DATE MAILED: 12/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/671,249

Applicant(s)

LIANG, GEORGE

Examiner

Igor Kershteyn

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3745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-18 is/are allowed.
- 6) ☒ Claim(s) 1-3, 9, 10, 13-15, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 4-8, 11 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 20 begins with the preamble "A method of internally cooling a guide member" but fails to set forth any of the steps of the method.

### ***Claim Objections***

Claim 20 objected to because of the following informalities:

Claim 20 recites the limitation "said first guided flow region" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 9, 10, 14, 15, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Moss et al. (4,604,031).

In figures 1-5, Moss et al. teach an internally-cooled fluid directing component 36 comprising: an elongated body member having a first end 40 and a second end 54; an interior cavity disposed within said body member, said interior cavity having a cooling fluid inlet 100 and a cooling fluid outlet 98; a partition member 64 disposed within said interior cavity and positioned to divide said interior cavity into a first channel 74 and a second channel 76; a turning zone 78 disposed within interior cavity and fluidly linking said first 74 and second 76 channels, at least one boundary member 94 disposed within said turning zone 78, said at least one boundary member 94 dividing said turning zone 78 into a first guided-flow region 96 and a second guided-flow region (not numbered); wherein said first channel 74, said turning zone 78, and second channel 76 cooperatively form a flowthrough path adapted to transmit cooling fluid between said cooling fluid inlet 100 and said cooling fluid outlet 98, whereby said first 96 and second guided-flow regions are adapted to direct a first portion of cooling fluid through said first guided-flow region 96 and a second portion of cooling fluid through said second guided-flow regions, respectively, thereby allowing strategic cooling of said turning zone 78.

Claims 1-3, 9, 10, 14, 15, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Beabout (5,669,759).

In figures 1-3, Beabout teaches an internally-cooled fluid directing component 32 comprising: an elongated body member having a first end 40 and a second end 38; an interior cavity 50 disposed within said body member, said interior cavity having a cooling fluid inlet 54 and a cooling fluid outlet (not numbered); a partition member 65 disposed within said interior cavity 50 and positioned to divide said interior cavity 50 into a first channel 60 and a second channel 61; a turning zone (not numbered) disposed within interior cavity 50 and fluidly linking said first 60 and second 61 channels, at least one boundary member 68 disposed within said turning zone, said at least one boundary member 68 dividing said turning zone into a first guided-flow region (not numbered) and a second guided-flow region (not numbered); wherein said first channel 60, said turning zone, and second channel 61 cooperatively form a flowthrough path adapted to transmit cooling fluid between said cooling fluid inlet 54 and said cooling fluid outlet, whereby said first and second guided-flow regions are adapted to direct a first portion of cooling fluid through said first guided-flow region 96 and a second portion of cooling fluid through said second guided-flow regions, respectively, thereby allowing strategic cooling of said turning zone.

Claims 1, 2, 13-15, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Jacala et al. (5,536,143).

In figures 5, and 11, Jacala et al. teach an internally-cooled fluid directing component 46 comprising: an elongated body member having a first end 72 and a second end 62; an interior cavity (not numbered) disposed within said body member,

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said interior cavity having a cooling fluid inlet 80 and a cooling fluid outlet 82; a partition member (not numbered) disposed within said interior cavity and positioned to divide said interior cavity into a first channel 142 and a second channel 144; a turning zone (not numbered) disposed within interior cavity and fluidly linking said first 142 and second 144 channels, at least one boundary member 146 disposed within said turning zone, said at least one boundary member 146 dividing said turning zone into a first guided-flow region (not numbered) and a second guided-flow region (not numbered); wherein said first channel 142, said turning zone, and second channel 144 cooperatively form a flowthrough path adapted to transmit cooling fluid between said cooling fluid inlet 80 and said cooling fluid outlet 82, whereby said first and second guided-flow regions are adapted to direct a first portion of cooling fluid through said first guided-flow region and a second portion of cooling fluid through said second guided-flow regions, respectively, thereby allowing strategic cooling of said turning zone, wherein second guided-flow region further includes at least one tapered region adapted to provide accelerated flow adjacent a corner 148 of said cavity.

Claims 1, 2, 14, 15, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Semmler et al. (6,347,923).

In figures 1-4, Semmler et al. teach an internally-cooled fluid directing component 1 comprising: an elongated body member 10 having a first end 30 and a second end 20; an interior cavity 22 disposed within said body member 10, said interior cavity 22 having a cooling fluid inlet (not numbered) and a cooling fluid outlet (not numbered); a partition

member 32 disposed within said interior cavity 22 and positioned to divide said interior cavity 22 into a first channel 24 and a second channel 26; a turning zone (not numbered) disposed within interior cavity 22 and fluidly linking said first 24 and second 26 channels, at least one boundary member 38 disposed within said turning zone, said at least one boundary member 38 dividing said turning zone into a first guided-flow region (not numbered) and a second guided-flow region (not numbered); wherein said first channel 24, said turning zone, and second channel 26 cooperatively form a flowthrough path adapted to transmit cooling fluid between said cooling fluid inlet and said cooling fluid outlet, whereby said first and second guided-flow regions are adapted to direct a first portion of cooling fluid through said first guided-flow region and a second portion of cooling fluid through said second guided-flow regions, respectively, thereby allowing strategic cooling of said turning zone.

***Allowable Subject Matter***

Claims 16-18 allowed.

Claims 4-8, 11, and 12 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 20 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

***Prior Art***

Prior art made of record but not relied upon is considered pertinent to Applicant's disclosure and consist of four patents.

Yamarik et al. (4,278,400) is cited to show an internally cooled fluid directing component having a body member, an interior cavity, a partition member, a turning zone, and a boundary member.

Pazder (4,474,532) is cited to show an internally cooled fluid directing component having a body member, an interior cavity, a partition member, a turning zone, and a boundary member.

Schwarzmann et al. (4,775,296) is cited to show an internally cooled fluid directing component having a body member, an interior cavity, a partition member, a turning zone, and a boundary member.

Matsuura et al. (6,257,830) is cited to show an internally cooled fluid directing component having a body member, an interior cavity, a partition member, a turning zone, and a boundary member.

***Contact information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kershteyn whose telephone number is **(571)272-4817**. The examiner can be reached on Monday-Friday from 8:00 a.m. to 4:30 p.m.

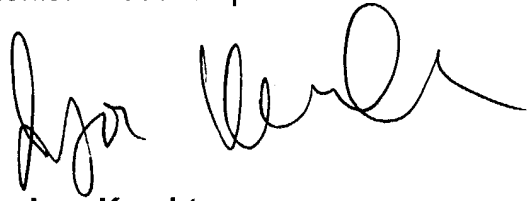
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached on **(571)272-4820**. The fax number is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308 0861.

IK

December 14, 2004



**Igor Kershteyn**  
**Patent examiner.**  
**Art Unit 3745**



**EDWARD K. LOOK**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 3700**

12/20/04